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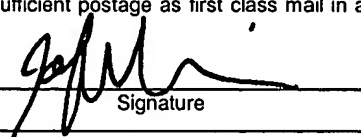
CASE DM-7029 DIV

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John A. Lamerdin, Ph.D.

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7/3/04

Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

Art Unit: 1647

BROWN ET AL.

Examiner: GUCKER, STEPHEN

APPLICATION NO: 10/820,307

FILED: APRIL 8, 2004

FOR: USE OF THE KCNQ2 AND KCNQ3 GENES FOR THE DISCOVERY  
OF AGENTS USEFUL IN THE TREATMENT OF NEUROLOGICAL  
DISORDERS

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This paper is being filed within three months of the filing date of the application. Therefore, no fees are required. If a fee is deemed to be required, the Commissioner is hereby authorized to charge such fee to Deposit Account No. 19-3880.

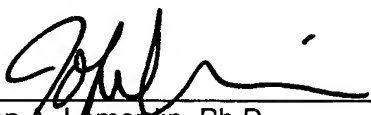
In accordance with 37 C.F.R. §1.56, applicants wish to call the Examiner's attention to the references cited on the attached form(s) PTO-1449.

The listed references are of record in parent Application No. 09/454,868 filed December 3, 1999, and copies are available therein. However, applicants are willing to send copies of any or all of these references at the Examiner's request.

The Examiner is requested to consider the foregoing information in relation to this application and indicate that each reference was considered by returning a copy of the initialed PTO 1449 form(s).

Respectfully submitted,

Bristol-Myers Squibb Company  
Patent Department  
P.O. Box 4000  
Princeton, NJ 08543-4000  
609-252-3575

  
\_\_\_\_\_  
John A. Lamerdin, Ph.D.  
Attorney for Applicants  
Reg. No. 44,858

Date: 7/8/04

Form PTO-1449  
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PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.  
DM-7029 DIVSERIAL NO.  
10/820,307**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

(Use several sheets if necessary)

APPLICANT  
Brown et al.FILING DATE  
4/8/04

GROUP

**U. S. PATENT DOCUMENTS**

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
AA	5 1 7 3 4 8 9	12/22/92	Earl et al.	514	252	
AB	5 4 1 4 0 0 4	05/09/95	Wilkerson et al.	514	339	

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
						YES	NO
AC	9 7 2 3 5 9 8	07/03/97	PCT				
AD	9 7 2 3 6 3 2	07/03/97	PCT				
AE	9 9 0 7 8 3 2	02/18/99	PCT				

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

AF	Shen et al., "Improved expression cloning using receptor genes and Epstein-Barr virus ori-containing vectors". (1995) <i>Gene</i> , 156:235-239.
AG	Sudgen et al., "A vector that replicates as a plasmid and can be efficiently selected in B-lymphoblasts transformed by Epstein-Barr virus". (1985) <i>Mol. Cell. Biol.</i> , 5:410-413.
AH	Yang et al., "Functional expression of two KvLQT1-related potassium channels responsible for an inherited idiopathic epilepsy". (1998) <i>J. Biol. Chem.</i> , 273(31):19419-19423.
AI	Charlier et al., "A pore mutation in a novel KQT-like potassium channel gene in an idiopathic epilepsy family". (1998) <i>Nature Genetics</i> , 18: 53-55.
AJ	Biervet et al., "A potassium channel mutation in neonatal human epilepsy". (1998) <i>Science</i> , 279:403-406.
AK	Singh et al., "A novel potassium channel gene, KCNQ2, is mutated in an inherited epilepsy of newborns". (1998) <i>Nature Genetics</i> , 18:25-29.
AL	Brown, D.A., "M-Currents: An update". (1988) <i>Trends Neurosci.</i> , 11:294-299.
AM	Wang et al., "KCNQ2 and KCNQ3 potassium channel subunits: Molecular correlates of the M-channel". (1998) <i>Science</i> , 282:1890-1893.
AN	D.A. Brown, in <i>Ion Channels</i> . T. Narahashi, Ed. (Plenum, New York, 1988), pp. 55-94.
AO	W.M. Yamada, C. Koch, P.R. Adams, in <i>Methods in Neuronal Modeling</i> , C. Koch and I. Segev, Eds. (Bradford, Cambridge, 1989), pp. 97-133.
AP	Wang, H.S. & McKinnon, D., "Potassium currents in rat prevertebral and paravertebral sympathetic neurones: control of firing properties". (1995) <i>J. Physiol.</i> , 485(2):319-335.
AQ	Brown, D.A. & Adams, P.R., "Muscarinic suppression of a novel voltage-sensitive K <sup>+</sup> current in a vertebrate neurone". (1980) <i>Nature</i> , 283:673-676.
AR	Constanti, A. & Brown, D.A., "M-currents in voltage-clamped mammalian sympathetic neurones". (1981) <i>Neurosci Lett.</i> , 24:289-294.

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Form PTO-1449 (Reproduced)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET, DM-7029 DIV	SERIAL NO. 10/820,307
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)		APPLICANT Brown et al.	
		FILING DATE 4/8/04	GROUP

## U. S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AS	Storm, J.F., "An after-hyperpolarization of medium duration in rat hippocampal pyramidal cells". (1989) <i>J. Physiol.</i> , 409:171-190.
AT	Constanti, A. & Sim, J.A., "Calcium-dependent potassium conductance in guinea-pig olfactory cortex neurones <i>in vitro</i> ". (1987) <i>J. Physiol.</i> , 387:173-194.
AU	Womble, M.D. & Moises, H.C., "Muscarinic inhibition of M-current and a potassium leak conductance in neurones of the rat basolateral amygdala". (1992) <i>J. Physiol.</i> , 457:93-114.
AV	Wang et al., "Positional cloning of a novel potassium channel gene: KVLQT1 mutations cause cardiac arrhythmias". (1996) <i>Nature Genetics</i> , 12:17.
AW	Wei et al., "Eight potassium channel families revealed by the <i>C. elegans</i> genome project". (1996) <i>Neuropharmacol.</i> , 35(7):805-829.
AX	Sanguinetti et al., "Coassembly of K <sub>v</sub> LQT1 and minK (IsK) proteins to form cardiac I <sub>ks</sub> potassium channel". (1996) <i>Nature</i> , 384(7):80-83.
AY	Barhanin et al., "K <sub>v</sub> LQT1 and IsK (minK) proteins associate to form the I <sub>ks</sub> cardiac potassium current". (1996) <i>Nature</i> 384(7):78-80.
AZ	MacKinnon, R. & Yellon, G., "Mutations affecting TEA blockade and ion permeation in voltage-activated K <sup>+</sup> channels". (1990) <i>Science</i> , 250:276-279.
BA	Heginbotham, L. & MacKinnon, R., "The aromatic binding site for tetraethylammonium ion on potassium channels". (1992) <i>Neuron</i> , 8:483-491.
BB	Marrion et al., "Multiple kinetic states underlying macroscopic M-currents in bullfrog sympathetic neurons". (1992) <i>Proc. R. Soc. Lond., B</i> 248:207-214.
BC	Cassell, J.F. & McLachlan, E.M., "Muscarinic agonists block five different potassium conductances in guinea-pig sympathetic neurones". (1987) <i>Br. J. Pharmacol.</i> , 91:259-261.
BD	Wang, H.S. & McKinnon, D., "Modulation of inwardly rectifying currents in rat sympathetic neurones by muscarinic receptors". (1996) <i>J. Physiol.</i> , 492(2):467-478.
BE	Aiken et al., "Reduction of spike frequency adaptation and blockade of M-current in rat CA1 pyramidal neurones by linopirdine (DuP 996), a neurotransmitter release enhancer". (1995) <i>Br. J. Pharmacol.</i> , 115:1163-1168.

EXAMINER	DATE CONSIDERED
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**FOREIGN PATENT DOCUMENTS**

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

BF	Lamas et al., "Effects of a cognition-enhancer, linopirdine (DuP 996), on M-type potassium currents ( $I_{K(M)}$ ) and some other voltage- and ligand-gated membrane currents in rat sympathetic neurons". (1997) <i>Eur. J. Neurosci.</i> , 9:605-617.
BG	Costa, A.M.N. & Brown, B.S., "Inhibition of M-current in cultured rat superior cervical ganglia by linopirdine: Mechanism of action studies". (1997) <i>Neuropharmacol.</i> , 36:1747-1753.
BH	Dixon et al., "Role of the Kv4.3 K <sup>+</sup> channel in ventricular muscle". (1996) <i>Circ. Res.</i> , 79:659-668.
BI	Dixon, J.E. & McKinnon, D., "Potassium channel mRNA expression in prevertebral and paravertebral sympathetic neurons". (1996) <i>Eur. J. Neurosci.</i> , 8:183-191.
BJ	Stansfeld et al., "A physiological role for ether-à-go-go K <sup>+</sup> channels?" (1997) <i>Trends Neurosci.</i> , 20:13-14.
BK	Shi et al., "Identification of two nervous system-specific members of the <i>erg</i> potassium channel gene family". (1997) <i>J. Neurosci.</i> , 17(24):9423-9432.
BL	Shi et al., "Cloning of a mammalian <i>elk</i> potassium channel gene and EAG mRNA distribution in rat sympathetic ganglia". (1998) <i>J. Physiol.</i> , 511:675-682.
BM	Lampe, B.W. & Brown, B.S., "Electrophysiological effects of DuP 996 on hippocampal CA1 neurons". (1991) <i>Soc. Neurosci.</i> , Abstract No. 17:1588.
BN	Iannotti et al., "The expression pattern KCNQ2 splice variants in neuronal proliferation and differentiation". (1998), <i>Soc. Neurosci.</i> , Abstract No. 330.14, 24:829.
BO	Wang et al., "The KQT2 channel is a molecular correlate of the M-channel in sympathetic neurons". (1998), <i>Soc. Neurosci.</i> , Abstract No. 792.1, 24:1984.
BP	Dworetzky et al., "Cloning and expression of mouse KCNQ2: A nervous-system specific voltage-gated potassium channel". (1998) <i>Soc. Neurosci.</i> , Abstract No. 813.1, 24:2032.
BQ	Gribkoff et al., "Characterization of the novel mouse brain-specific voltage-dependent potassium channel KCNQ2 expressed in xenopus oocytes and CHO cells". (1998) <i>Soc. Neurosci.</i> , Abstract No. 813.10, 24:2033.

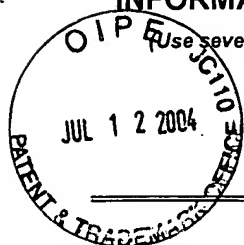
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## INFORMATION DISCLOSURE CITATION

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ATTY. DOCKET NO.  
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APPLICATION NO.  
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APPLICANT  
BROWN ET AL.  
FILING DATE  
April 8, 2004Group  
1647

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	AA						
	AB						
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	OFFICE	CLASS	SUBCLASS	TRANSLATION	
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	AN						<input type="checkbox"/>	<input type="checkbox"/>
	AO						<input type="checkbox"/>	<input type="checkbox"/>
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	AQ						<input type="checkbox"/>	<input type="checkbox"/>

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

AR	NCBI Accession No. gi:1841341, Yokyama, et al., March 18, 1999
AS	Yang, et al. (1997) Proc. Natl. Acad. Sci. 94:4017-4021
AT	Pongs (1992) Physiological Reviews 72(4):S69-S88

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1647

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent pages, Etc.)

2AA	Jan, et al. (1992) Annual Rev. Physiol. 54:537-555
2AB	Catterall (1995) Annu. Rev. Biochem. 64:493-531
2AC	Yokoyama, et al. (1996) DNA Research 3:311-320
2AD	Editor: Cook (1990) - Potassium Channels, Structure, Classification, Function and Therapeutic Potential; Ellis Horwood Ltd. Publisher
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Case No.: Dm7029 DIV

Application No.: 101820,307

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The Patent & Trademark Office acknowledges, and has stamped hereon the date of receipt of the items checked below:

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